

Geological criteria and geophysical methods of natural bitumen deposits preparation to the development

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Abstract

© 2018 Institute of Physics Publishing. All rights reserved. The article considers the provisions of the ontogenesis of the following factors in the formation of natural bitumen clusters in the Permian deposits of the Melekesskiy region: genetic, geodynamic, structural and hydrogeological. It is shown that tectonically weakened zones and zones of Neogene incisions development are fixed by high-precision gravimetry in the form of intense local minima of gravity. A favorable factor contributing to the "strengthening" of anomalous geophysical effects is the coincidence of the locations of these geological section heterogeneities in the plan. It is recommended at the stage of experimental-industrial operation a complex of geophysical methods for monitoring the processes of natural bitumen deposits development by means of secondary impact on the formation. High-precision magnetic, thermal and electrical prospecting in various modifications are used.

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